Monthly Multidisciplinary
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GoldenResearch
Thoughts

GRT Development Of A Test To Measure Ict Awareness (ictat) Of B.ed. Student Teachers

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Abstract: The term ICT should be read as "Information Technology and Communication Technology" literally to clarify its meaning which refers to the merging (convergence) of telephone networks with computer networks through a single cabling or link system. The term ICT has grown in usage out of huge economic incentives (huge cost saving due by eliminating the telephone network) to merge the telephone network with the computer network system. In this research paper an attempt has been made to construct and standardize the ICT Awareness Test to measure ICT Awareness of B.Ed. student teachers, as there is no suitable questionnaire available to measure the ICT Awareness of B.Ed. student teachers.

Key words: Information Technology , Communication , Technology , telephone network .

INTRODUCTION :

In recent years there has been a groundswell of interest in how computers and the Internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in both formal and non-formal settings. But ICTs are more than just these technologies; older technologies such as the telephone, radio and television, although now given less attention, have a longer and richer history as instructional tools. Since pupils are the nation builders of tomorrow and are the vital part of our community, such awareness has to rightly start from here. That is why the researcher feels B.Ed. student teachers are the forthcoming teachers, if only they have enough ICT awareness, they can in turn inculcate to their students. Hence the investigator decides to choose B.Ed. student teachers as the sample for this study.

In order to construct the test the investigator collected a variety of information regarding ICT from the experts and other sources, Based on that as many as 70 multiple choice questions covering the following dimensions were coined:

1. Computer
2. Internet
3. Multimedia
4. E-mail
5. E-book
6. E-journal
7. E-library
8. E-governance
9. You tube
10. Skype

METHODOLOGY

This test comprises of 70 items with ten dimensions. There were 7 questions in each of the ten dimensions. The maximum mark for a question is 1 and the minimum mark is 0. Therefore one can get a maximum score of 70 and a minimum score of 0 on this test. After having constructed the ICT Awareness test the investigator administered this test on a sample of 200 B.Ed. student teachers for pilot study in order to carry out the item analysis.

ITEM ANALYSIS

Item analysis is an important step in the standardization of any test. The two criterion groups with 54 scripts each in the upper (top 27%) and the lower (top 27%) were formed. Then the index of difficulty and the index of discrimination for all the 70 questions were computed.

By convention items with difficulty index higher than 10% or lower than 90% are retained. Similarly, items with index of discrimination above 0.30 are retained. In the present study, only items having index of difficulty in the range of 52% to 81% and index of discrimination ranging from 0.31 to 0.50 were selected. Accordingly 60 items were selected out of 70 items and this constituted the final form of the test. The details of item analysis are given in Table 1.

TABLE 1 ITEM ANALYSIS – INDICES OF ITEM DIFFICULTY & DISCRIMINATION IN PILOT STUDY

S. No	No. of Students (54) in the high group who responded correctly	No. of Students (54) in the low group who responded correctly	Index of item difficulty	Index of discrimination	Item selected
1	33	10	80	0.43	S
2	27	05	59	0.41	S
3	31	07	70	0.44	S
4	32	07	72	0.46	S
5	26	09	65	0.31	S

K. Elumalai And S. Kulasekara Perumal Pillai, "Development Of A Test To Measure Ict Awareness (ictat) Of B.ed. Student Teachers" Golden Research Thoughts Vol-3, Issue-4 (Oct 2013): Online & Print

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6	34	19	98	0.28	NS
7	31	07	70	0.44	S
8	32	11	79	0.39	S
9	32	10	78	0.41	S
10	32	18	92	0.25	NS
11	32	06	70	0.48	S
12	24	07	57	0.31	S
13	26	08	61	0.33	S
14	34	09	81	0.45	S
15	21	09	55	0.22	NS
16	29	05	63	0.44	S
17	28	05	61	0.43	S
18	35	08	80	0.50	S
19	31	05	66	0.48	S
20	31	09	74	0.41	S
21	30	05	65	0.46	S
22	28	08	67	0.37	S
23	33	09	78	0.44	S
24	29	06	64	0.43	S
25	29	07	67	0.41	S
26	32	11	79	0.39	S
27	27	07	63	0.37	S
28	33	18	94	0.28	NS
29	30	11	78	0.35	S
30	22	05	53	0.31	S
31	25	08	61	0.31	S
32	29	11	74	0.33	S
33	24	05	53	0.35	S
34	21	11	60	0.18	NS
35	34	07	76	0.50	S
36	33	07	74	0.48	S
37	27	06	61	0.39	S
38	25	05	55	0.37	S
39	33	10	80	0.43	S
40	21	12	60	0.16	NS
41	31	07	70	0.44	S
42	32	07	72	0.46	S
43	26	09	65	0.31	S
44	30	19	91	0.20	NS
45	28	09	69	0.35	S
46	32	05	68	0.50	S
47	28	07	65	0.39	S
48	32	08	74	0.44	S
49	28	06	63	0.41	S
50	31	11	77	0.37	S
51	21	08	53	0.24	NS
52	26	05	57	0.39	S
53	23	06	54	0.31	S
54	25	07	59	0.33	S
55	34	08	78	0.48	S
56	31	06	68	0.46	S
57	27	08	65	0.35	S
58	31	17	88	0.25	NS
59	23	05	52	0.33	S
60	30	12	78	0.33	S

61	26	06	59	0.37	S
62	28	07	65	0.39	S
63	32	08	74	0.44	S
64	30	08	71	0.41	S
65	31	08	72	0.43	S
66	20	11	57	0.16	NS
67	30	06	67	0.44	S
68	33	10	80	0.43	S
69	33	08	76	0.46	S
70	32	09	76	0.43	S

(S – Selected ;   N.S – Not Selected)

Reliability and Validity of the Test

The reliability of the test has been established by using the test-retest method and was found to be 0.76; the intrinsic validity has been calculated by taking the square root of the reliability of the co-efficient, i.e., 0.76= 0.90. Thus from the two co-efficient it may be inferred that this test is highly reliable and valid.

Norms for the Environmental Knowledge Test

The 'Z' score and the 'T' scores are given in Table 2.

TABLE 2
Z AND T SCORES OF THE SAMPLE ON THE ICT AWARENESS TEST

S. No	Raw Scores X	$Z = \dfrac{X - M}{\sigma}$	$T = 10 Z + 50$
1	67	0.9406	59.406
2	66	0.8682	58.682
3	65	0.7958	57.958
4	64	0.7233	57.233
5	63	0.6509	56.509
6	62	0.5785	55.785
7	61	0.5061	55.061
8	60	0.4337	54.337
9	59	0.3613	53.613
10	58	0.2889	52.889
11	57	0.2165	52.165
12	56	0.1440	51.440
13	55	0.0716	50.716
14	54	-0.0007	49.993
15	53	-0.0731	49.269
16	52	-0.1455	48.545
17	51	-0.2179	47.821
18	50	-0.2903	47.097
19	49	-0.3627	46.373
20	48	-0.4351	45.649
21	47	-0.5076	44.924
22	46	-0.5800	44.200
23	45	-0.6524	43.476
24	44	-0.7248	42.752
25	43	-0.7972	42.028
26	42	-0.8696	41.304
27	41	-0.9420	40.580
28	40	-1.0144	39.856
29	39	-1.0890	39.110
30	38	-1.1593	38.407
31	37	-1.2317	37.683
32	36	-1.3041	36.959

33	35	-1.3765	36.235
34	34	-1.4489	35.511
35	33	-1.5213	34.787
36	32	-1.5937	34.063
37	31	-1.6661	33.339
38	30	-1.7385	32.615
39	29	-1.8110	31.890
40	28	-1.8834	31.866

The percentile norms are presented in Table 3 below.

TABLE 3
PERCENTILE NORMS FORTHE ICT AWARENESS
TEST

Percentiles	IAT
10	36
20	44
30	47
40	51
50	54
60	57
70	61
80	64
90	67

The final version of the ICT Awareness test has been prepared with the 60 valid items. The maximum possible score will be 60 and the minimum will be zero. Higher the score in the test, greater is the ICT Awareness of the candidate.

REFERENCES

Ebel, R.L., Measuring Educational Achievement, New Delhi; Prentice Hall of India (P) Ltd., 1966.
Garrett, H.E., Statistics in Psychology and Education, Hyderabad; International Book, Bureau, 1979.
Guilford, J.P., psychometric Method (2nd Edition) Bombay, Tata Mc Graw Hill Publishing Company Ltd., 1954.
Lindman, R.H., Educational Measurement, Bombay; Tara Porevala Sons, 1971.
Remmers, h.H., et.al., A Practical Introduction to Measurement and Evaluation, Delhi University Book Stall, 1967.

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